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ABSTRACT

This report, developed by the Committee on the Education and Employment of Women in the University, presents the results of a survey of Stanford seniors and makes recommendations on how the university can end discrimination and provide more opportunities for women. Data were the result of a survey of 280 graduating seniors. The survey was designed to find out what fields Stanford undergraduates choose for their studies and future jobs, and how the University environment influences their choice. The report considers the educational and occupational plans of men and women undergraduates in 1972 and in 1965, the sex role expectations and the Stanford environment, and the effects of academic and occupation counseling at Stanford. The Committee's recommendations are summarized at the end of the report. The appendix includes the questionnaire and a discussion of research procedures.
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THE STANFORD WOMAN IN 1972

A study of undergraduate choice of academic fields and future occupations. With recommendations to President Lyman from the Committee on Education and Employment of Women at the University.

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THE STANFORD WOMAN IN 1972

A survey of the senior class of 1972 shows that the Stanford undergraduate woman has changed remarkably over the past five years. She no longer accepts the traditional roles which society has assigned to her as a member of the female sex. Graduating men and women seniors have very similar educational and occupational aspirations. There is little difference between the proportions of women and men who plan to become professionals: doctors, lawyers, college professors, and scientists. And the same proportions of men and women plan to go on for graduate study.

Sex discrimination occurs at Stanford but its incidence is limited. One-fourth of the graduating senior women say they were discouraged from some goal by sex discrimination while they were at Stanford. And changes between major fields can to some extent be predicted by the sex of the student and the traditional sexual composition of the majors.

This report presents the results of a survey of Stanford seniors and makes recommendations on how the University can end discrimination and provide more opportunities for women. The first section of the report considers the educational and occupational plans of men and women undergraduates in 1972 and in 1965. The second section concerns sex-role expectations and the Stanford environment. It discusses women's experiences of discrimination at Stanford, and the pattern of choosing majors which perpetuates the existence of predominantly male fields. The third section discusses the effects of academic and occupation counselling at Stanford. The Committee's recommendations are summarized at the end of the report.

The data presented in this report is the result of a survey of 280 graduating seniors conducted in the Spring of 1972. The questionnaire, "A Survey of Major and Occupational Choice," was designed to find out what fields Stanford undergraduates choose for their studies and future jobs, and how the University environment influences their choices. Recipients of the questionnaire were randomly chosen in groups by sex and the academic field in which they were interested when they entered Stanford. Data presented here has been weighted to be representative of the whole graduating class, unless otherwise indicated. 136 men and 144 women responded to the mailed questionnaire, giving a response rate of 79%. The questionnaire and a discussion of research procedures are presented in the Appendix.

I. THE NEW STANFORD WOMAN

Occupational Plans of the Class of 1972

Perhaps the most significant finding of the survey of major and occupational choice is the similarity of the plans of men and women students. In the past it was assumed that most Stanford men would become professionals or businessmen while Stanford women would become housewives, school teachers, and secretaries. This stereotype used to approximate reality. It is no longer valid.

In the Stanford class of 1972, a similar proportion of men and women plan to enter major professions. 69% of the men and 53% of the women who have a single definite long-range plan say they will become doctors, lawyers, college professors and scientists. When this is generalized to the entire class, (including those who have vague plans or more than one plan), 28% of senior women and 30% of senior men are definitely planning to enter a major profession.[1]

The following table shows the responses of those who said they had definite long-range occupational plans. Data representing the plans of the whole population, including those who are uncertain, shows a very similar pattern.[2]

TABLE I

LONG RANGE OCCUPATIONAL PLANS
(for students who have definite plans)

	Male (%)	*Female (%)*
Medical Professions: doctors, psychiatrists, dentist, etc.	30.2	20.3
Legal Professions: lawyer, judge, CPA, etc.	22.4	15.6
College educator, scientist	16.2	17.0
Elementary, secondary school teacher	3.9	8.3
Certified social service and lesser medical: including veterinarian, psychotherapist, etc.	2.0	3.3
Religious professions	1.9	0.0
Business	6.0	3.0
Government administration	2.0	2.5
Scientific and medical service: including nursing, X-ray technician, statistician, etc.	2.6	11.1
Art, music, entertainment, literature	4.0	8.2
Lesser white collar[3]	0.0	1.7
More than one plan	8.8	9.8
	N=68	N=84

It is apparent that the occupational choices of Stanford women do not fit into sexual stereotypes. Information on all the occupations which students considered at Stanford shows that the women respondents began with more traditional ideas as freshmen and moved away from traditional considerations during their time at the University. (See Appendix 5-6.)

Women and men not only have very similar occupational plans, they also seem to have the same level of commitment to their occupations and the same expectations of success. As a measure of the seriousness of occupational intent, students were asked how they had prepared for their planned future occupations. The same proportion of women and men said that they had prepared themselves by such activities as talking to individuals in the occupation, acquiring needed credentials or training, and finding employment (see Appendix 5-5).

Expectations of success were measured by asking students what ideally would be their occupation or main activity in five years and what, realistically, they thought they would be doing. Most students said they would probably be engaged in their ideal occupations, (71% of the men and 58% of the women). While fewer women than men believe they will be engaged in their ideal occupations, no more women than men think they will be engaged in lower status occupations. Of those who do not believe they will be engaged in their ideal occupations, 26% of the men and 28% of the women said they would probably be engaged in an occupation that was lower status than their ideal occupation.[4]

The three most frequently mentioned ideal occupations were medicine, law, and college educator-scientist.

TABLE 2

SELECTED "IDEAL" AND "REAL" OCCUPATIONS[5]

	Male (%)		*Female (%)*	
	Ideal	Real	Ideal	Real
Medical professions	20	22	18	19
Legal professions	15	15	7	7
College educator-scientist	13	12	13	7
	N=108		**N=125**	

As Table 2 shows, virtually all of the men and women that aspire to these professions expect to reach their goals, with the single exception of women who would like to be college professors or scientists. 12% of the women hold this ideal but only 7% believe they can realistically attain it. This is by far the biggest gap between ideal and realistic assessments for any sex or occupation. It is interesting that women students have the least confidence about the occupation to which they have had the most exposure at Stanford: college professor.

Educational Plans of the Class of 1972

The educational plans of graduating men and women students are also quite similar. Just as many men as women plan to go on for further education at some point in the future, as the following data shows.

TABLE 3

	Male	*Female*
% Having definite educational plans	84.5	81.3
% Having uncertain educational plans	4.4	8.5
% Having no further education planned	11.2	10.2
	N=133	**N=144**

Approximately the same proportion of men and women are also going on for graduate study in the next six months, (54 percent of the men and 49 percent of the women).[6]

Doctoral and professional programs have traditionally been filled with men, while women have tended to enter masters programs. This trend is still apparent with this year's Stanford graduates, but the gap is closing. 52% of the women and 74% of the men who said they were going on for further education are planning to get a doctorate, or a degree in law or medicine. 41% of the women and 23% of the men are getting Masters degrees. The remaining students will be getting technical licenses, professional B.A.s or certificates of some kind.[7]

A Comparison of Senior Women in 1965 and 1972

The plans of graduating Stanford women have changed dramatically in the past few years. Data gathered on the Class of 1965 by the Institute for the Study of Human Problems shows striking differences from the Class of 1972. In "Career and Autonomy in College Women," Joseph Katz draws the following conclusion:

> . . .even in as academically able a group of students as the Stanford women, the orientation toward occupational roles is a very "traditional" one, even though, as we will later see, there is a high valuation of the occupational life. . . .the women are oriented towards family and their biggest occupational aspiration is elementary and secondary school teaching.[8]

Similar findings have been reported by many other studies of the occupational plans of women students in the 1950s and the early 1960s.[9]

The following table compares the occupational plans of women graduating in 1965 and 1972, and shows how much Stanford undergraduates have changed in the past 7 years. The data for the two time periods are not completely comparable, since different research procedures were used in the two studies.[10] However, the comparisons between men and women within each time period are valid.

The table shows a dramatic rise in the proportion of women interested in the professions, and a sharp decrease in the proportion who intend to be teachers. These changes are clear, even though the 1972 data represents women's most pessimistic estimates of their future occupations, i.e., their realistic assessments of what they would be doing in five years, as opposed to their occupational plans.

TABLE 4

OCCUPATIONAL PLANS OF CLASS OF 1965 & 1972

	1965[11]		1972[12]	
	Women (%)	*Men (%)*	*Women (%)*	*Men (%)*
Medicine, law, other professions[13]	5.8	36.2	26.1	41.5
Elementary & secondary education	36.1	6.2	10.4	2.0
College educator, scientist	13.9	19.1	6.6	11.6
Business	4.4	17.1	5.1	6.8
"Women's Jobs" housewife, secretary, nurse	11.7	0.0	3.2[14]	0.0
Government	3.3	2.8	1.2	3.2
Other[15]	24.5	18.7	46.8	34.3
	N=208	N=460	N=122	N=111

In 1965, the ratio of men to women that planned to enter professions was 6 to 1; in 1972 the ratio is 1.6 to 1. The proportion of women planning to enter elementary and secondary education has decreased from 36% to 10% and the same proportion of men and women now plan to enter business.

Stanford women have changed their conceptions of their marital and childbearing roles, as well as their occupational and education plans. Katz's respondents were acutely aware of their future roles as wives and mothers, and most assumed that their occupational goals would be secondary to their duties to their husbands and children. 70% of these women said they would not work at all when their children were under 6 years old, and only 43% intended to work full time when their children were over 12 years of age.[16]

Stanford women no longer think along these lines. The 1972 respondents were not asked directly about their plans for marriage and childrearing, but the women were given ample opportunity to mention the future role of wife and mother. Few women ever mentioned the topic.

In one series of questions, we asked women what they were planning to do after graduation, and how long they planned to continue in that activity. Traditional patterns led us to expect that a significant proportion of the women would say they planned to work either until they had put their husbands through school, or until it was time to raise children.[17] Only 3% of the women who were leaving college to work said they would stop when their husbands had finished school, and only 7% said they would stop to raise children. Traditional role expectations still exist at Stanford, but they are the exception rather than the rule.

This conclusion is also supported by their responses about "ideal" and "real" future activities. Only 3% of the women said that, ideally, they would be housewives in five years and an additional .4% thought that realistically they would be housewives at that time. In five years, most of these women will be 26 or 27 years old, an age at which, in the past, a majority of women already have small children. However, only 15% of the women said that they realistically expected childraising and housework to be a major activity, in addition to some kind of employment. In all, only 18.5% of the women mentioned the role of wife and mother as part of their main activities in the next 5 years.

In sum, the data show that Stanford women have broken away from traditional stereotypes about "the woman's role" in the last seven years. Women and men now have very similar occupational and educational plans. Women no longer seem to regard a job as "something to fall back on." They take their plans seriously, and they expect to succeed.

Policy Implications

1. It is important that all members of the Stanford community – administrators, professors, advisers, and counsellors – understand the new aspirations of women undergraduates. The best cure for sex-role stereotypes is information. For this reason, the findings of this study should be publicized as widely as possible. We recommend that the Dean of Undergraduate Studies and the Provost take steps to ensure that the findings of this study are communicated to all professors, advisers,

counsellors and administrators, especially those who have extensive contact with undergraduates.

2. Stanford University as an institution employing over 7,000 men and women is responsible for setting an example by eliminating all discriminatory hiring and promotional practices. The administration should continue to give high priority to its affirmative action efforts, and to publicize them as widely as possible.

II. SEX ROLE EXPECTATIONS AND THE STANFORD ENVIRONMENT

Knowing that Stanford men and women share substantially the same aspirations, it is important to ask whether Stanford's treatment of its students is consistent with these aspirations. Are Stanford women discouraged from entering traditionally male fields and seeking careers in predominantly male areas? Are they encouraged to be housewives and school teachers, when many would prefer to be doctors and professors?

By and large, the answer to these questions appears to be no. Most women do not believe that they encountered discrimination while they were at Stanford, but a significant number of Stanford women have been influenced to limit their educational and occupational choices because of their sex. Most departments and professors do not discriminate against women; but some do.

Experience with Discrimination

When asked, "do you feel you have been discouraged from any academic or occupational goals by a member of the Stanford community because of your sex?" 29 of the 128 women who responded said yes. This generalizes to 23% of all Stanford women. Another 5% of the women experienced discrimination but were not discouraged by it. Most of these women were discouraged by contacts with faculty members.[1]

In all, almost one-quarter of Stanford women are discouraged by discrimination. The forms which this discrimination takes range from explicit discouragement from a professor to more subtle environmental cues. The observations of some of the women respondents illustrate this quite clearly. The following quotations drawn from survey responses illustrate overt discouragement of women by their advisers:

> *Dr. X, a pre-med adviser, had a dim view of the possibility of women actually making it through all the work necessary to be a doctor, and later of her juggling work, children, etc. . . . There were 2 other girls in our advisee group. He said he didn't expect to see us the next year. . . .*
>
> *Not only my major adviser, but several of my professors in my department failed to offer any encouragement or assistance and in some cases actively discouraged me from further study in mathematics – both when I sought advice and approval for advanced study and when I sought assistance and consultation in courses I was taking. A largely negative reaction (at best, I was ignored) from male peers in math and science classes was also quite evident.*

My history adviser specifically discouraged me from going on to grad school. He kept suggesting high school teaching as "more flexible for a woman." And he did this even after I took several courses from him in which I did very well. He even urged me to take on the honors thesis program.

Other women described comments made by professors during lectures as a source of discouragement:

I took a class in (chemistry) from Dr. X – a required course for many med schools. He began his first lecture by saying there were 2 things he couldn't stand – premeds and women who thought they could be scientists. His actions were consistent with his prejudices.

One art teacher, XX, believes that women make better art teachers than artists – his suggestions to this effect have been to classes as a whole, not to me individually, but I think that his underlying sexism affects his relationship with me although he shows a respect for my work.

Some women found assessments of the employment situation for women in some fields more discouraging than helpful:

I have been told of personal experience of the bias against women in university level teaching. I would not seek employment as a member of an academic community (university).

. . .advisers have given me "realistic" appraisals which were very discouraging.

Finally, some women did not describe a direct communication at all, but a sense they had from what was around them:

It's difficult to be specific – one carries with him the prejudices; I wish now I had gone premed; I would like to be a doctor but women weren't doctors; and women didn't go on to be English professors – I didn't look much beyond teaching – and no one suggested anything else.

Though discouragement has not been overt (except in a couple of cases where people couldn't understand why I couldn't be happy teaching in high school) there is a lot of subtle discouragement. 1) The lack of female professors which really presents a problem in terms of role identity, 2) the number of professors that give only a negative account of their role (I don't understand why they're still in it), 3) a disbelief, from both professors and students, that I can combine being a woman with being a professor, 4) the way I see female professors now being treated (i.e. difficulty in obtaining tenure, refusal to see their courses as anything but "fun" (both professors and students), insinuations about their teaching ability and/or intelligence related to sex, etc.).

Policy Implications

Overt discouragement of women wishing to enter "male" fields and professions should not exist at Stanford in 1972. To counter such sexism when it results from ignorance, an effort should be made to increase awareness of the fact that women *are* capable of doing "male jobs" and succeeding in "male fields," and that many women do successfully combine professional and childrearing responsibilities. Any professor or counsellor who continues to discourage women students because of their sex should not be asked to advise them. We recommend that the

Dean of Undergraduate Studies develop a list of advisers that are particularly interested in working with women undergraduates. Students should be informed that they have the option of choosing someone from this list to replace their current adviser. In addition, the Dean of Undergraduate Studies should consider developing procedures by which students can register complaints if they experience discrimination from their adviser.

III. CHOICE OF MAJORS

Just as some occupations are usually seen as "men's jobs" and others as "women's jobs," so some academic fields are seen as primarily "male" or "female." The traditional perceptions of appropriate fields for men and women closely fit the actual proportions of each sex majoring in these fields at Stanford today. The science fields have few women, the humanities many more than their share. Students' changes between majors were assessed in order to find out if this distribution was due to interests and orientations acquired before students entered Stanford, or if the Stanford environment was in some way encouraging sex-typed choices of major fields. The results show that students do tend to move into fields dominated by their own sex while they are at Stanford. Women more than men switch out of fields such as Political Science and into fields like English and Music. More men than women move into fields which already have a large number of men and out of fields with a larger proportion of women. While students are breaking tradition in their career choices, they are prepetuating the sex-typing of major fields.

To assess patterns of switching between majors, fields were categorized as either male-dominated or non-male-dominated. All fields having less than 25% women were called male-dominated, the rest, non-male-dominated. (36% of Stanford undergraduates are women.) Male-dominated fields were further divided into science and non-science fields. Students were asked about the field in which they expressed an interest at the time they were accepted to Stanford, (referred to as their "freshman field of interest"), their first major, and the major with which they graduated.[1]

In the male-dominated science fields, Stanford students appear to bring their sex role stereotypes with them. Many more freshmen men than women are interested in these fields, but there is no change towards greater sex-typed choice between the freshman and senior year. Science fields retain and attract an equal proportion of men and women majors.[2]

The fields where Stanford students increasingly make their choices in terms of sex role stereotypes are the male dominated, nonscience fields: economics, history, political science, philosophy, architecture and urban design. Of those students who were interested in these fields as freshmen, more men than women remained in these fields until they graduated (60% vs. 53%). Moreover, in recruiting new majors, these fields attract many more men than women. Nonscience male-dominated fields attract 45% of the men who come to Stanford interested in non-male-dominated fields, and only 10% of the women.

Students who come to Stanford without a clear field of interest seem to be most influenced by pressures to select a field that is "appropriate" for their sex. The students who said they were considering both a male-dominated and a non-male-dominated field when they were accepted to Stanford showed almost no sex-typed switching. (3% of all freshmen men and 7% of all freshmen women were in this category.) On the other hand, the final majors of those who were undecided as entering freshmen and were not interested in any particular field, can be almost entirely predicted by sex-typing. 79% of these men graduated in male-dominated fields, 21% in non-male-dominated fields. 27% of the undecided women graduated in male-dominated fields, and 70% in non-male-dominated fields. (20% of freshmen women and 26% of freshmen men were undecided.)

The fact that students who come to Stanford with no idea of what they want to do show the most sex-typed behavior would seem to indicate that the University environment influences students to make this kind of choice. However, when students were asked why they made the choices they did, such pressures from the University were not evident. Women were not advised to shift out of male-dominated fields any more often than they were encouraged to shift into them. They did not respond that experienced or anticipated discrimination was a reason for such shifts, nor did they feel less capable of succeeding in male-dominated fields. The reasons which women give for changing majors do not explain the pattern of sex-typed switching.

Most of the women's sex-typed switching occurred between the time of their acceptance to Stanford and the time they declared their first major (by the end of their sophomore year).[3] This tendency for sex-typed major choice to be more frequent in the freshman and sophomore years has two possible explanations. Students may act more traditionally when they are younger or sex-role stereotypes may have been more dominant at Stanford three and four years ago.

Plans for graduate study also show some of the sex-typing. While more students plan graduate study in male-dominated than in non-male-dominated fields, in general, twice as many men as women do so. 45% of the women and 86% of the men with definite educational plans are going on in male-dominated fields.

TABLE 5

AREA OF FURTHER EDUCATION[4]

	Female (%)	*Male (%)*
Male-dominated fields	45.3	86.3
Non-male-dominated fields	42.4	10.1
Fields not typed	12.6	4.0
	N=105	**N=94**

Policy Implications

The overwhelming predominance of men in certain social science and humanities fields is perpetuated as women tend to avoid and leave these fields

while they are at Stanford. These departments – economics, history, philosophy, political science, architecture and urban design – should investigate this situation, looking, in particular, at their introductory classes. The sciences, which attract few women students, seem to be dealing with a phenomenon inherited from the high schools. All departments with few women majors should make an effort to attract them. One obvious step in this direction is to increase the number of women teaching in these fields.

We recommend that departments with fewer than 25% women majors should experiment with ways of attracting more women majors (such as distributing written materials through the Academic Information Center or encouraging current women majors to discuss the department's program with other women). These departments should also determine the proportion of women undergraduates that join and leave their undergraduate program. Departments may wish to confer with the Committee on the Employment and Education of Women about methods for recruiting women, and they should report their progress to the Committee by the end of Spring Quarter, 1973.

IV. ACADEMIC AND OCCUPATIONAL COUNSELLING

The survey shows that many students find Stanford services helpful at some point in their undergraduate careers, but very few feel that Stanford's advisers or counsellors have affected their occupational plans. Students were asked specifically about their contacts with their freshman advisers, academic advisers, and career counsellors in the placement center. Only a small proportion felt that these people had had any effect on their occupational plans.

TABLE 6

EFFECTS ON OCCUPATIONAL PLANS

(% of class affected)

	Freshman adviser		Academic adviser		Career counsellor	
	F	*M*	*F*	*M*	*F*	*M*
Great, considerable or some effect	15	22	30	33	12	5
No effect	62	54	43	55	32	33
No contact	23	22	24	12	57	60

Advising and Sex-Roles

One question asked of the data was whether or not men and women were advised to choose fields "appropriate" to their sex. In only one case did this trend seem apparent. There is some indication that the advice of freshmen advisers reflected sex-role stereotypes. 4 of the 5 students who said they were discouraged by their freshmen advisers were women and all of the women were discouraged in male fields. This bias did not appear in responses about academic advisers and career counsellors. Students were also asked about the nature of the contacts with

their advisers which affected their occupational considerations. It is significant that one-quarter of the women whose occupational plans had been affected by contacts with an adviser or counsellor said that the individual had discussed sex discrimination in the area they were considering.[1] Advisers are most influential as role models. When students were asked to "check the statements which you feel accurately describe the nature of the contacts with your freshman adviser which affected your occupational consideration," the most frequently checked response was "Adviser acted as a positive example of individual in field." "Adviser acted as a negative example of individual in field" was also checked frequently. Men and women students found advisers equally important as role models. It is important to note, however, that the large majority of these advisers are men.

Suggestions for Improvements

Students were asked to respond to two open ended questions about Stanford services: "What services that Stanford now offers, if any, have been helpful to you in planning your future:" and "What services which are not now offered would you find helpful:" 60% of the 136 men answering the questionnaire and 54% of the 144 women mentioned some service at Stanford which had been helpful to them. (These percentages refer to proportions of *respondents*. They have not been weighted to represent the whole class.) Those services mentioned most frequently were the Academic Information Center, (41 times), the Career Counselling and Placement Center, (39 times), and the pre-med advising services, (18 times). 51 men and 61 women suggested improvements in Stanford services. The most frequent target of suggestions were the departments, especially among women. 32 women and 15 men said that departments should be more helpful in planning their futures. Helping students plan their futures would be a new role for departments. Only 11 students said their departments had actually been helpful while they were at Stanford, and most of the praise resulted from opportunities for practical experience in their fields, not from advice or information they had received.

Generally, students said they would have liked more informal, personal contacts with professors, counsellors, and people in the fields they are considering to give them a better sense of what they wanted to do in the future. One student suggested:

> *a broad, coordinated counselling service, with competent people who can talk meaningfully about a variety of occupations and lifestyles those occupations shape. (Not just an engineering counsellor for engineering, an econ adviser for econ, etc.)*

Departments were suggested as an alternative source of information about the employment possibilities stemming from a field of study.

A larger proportion of women than men students have immediate need of career counselling and placement services. More of the women are planning to get a full-time job as soon as they leave Stanford. 29% of the women and 18% of the men said they expected to be working full-time in the six months after graduation.[2] Women also seem to need more help in finding jobs. 26% of the women who were planning to work full-time after graduation have already looked for jobs in the area in which they wanted to work, and only 7% had found jobs. 18% of

the men had looked for employment, and 11% had found jobs.[3] Therefore, it is particularly important for women students that occupational counselling services be improved.

Policy Implications

1. The Career Planning and Placement Center should make a special effort to help women plan their careers and find jobs. Since a large number of women are trying to find jobs in areas where few women have been hired before, the Placement Center should make aggressive efforts to place these women.

We recommend that the Career Planning and Placement Center report on what activities and what additional staff are required in order to provide better service to women undergraduates.

2. Women should be prepared to cope with discrimination when they encounter it. We recommend that legal and practical counselling about dealing with discrimination be made available at the Placement Center.

3. Major department should be involved in occupation counselling efforts. The experience and contacts of Stanford professors remain a largely untapped resource. As some students suggested, departments should institute programs in conjunction with the Career Planning and Placement Center which offer an overview of the occupations open to men and women with training in different academic fields. Women should be well represented in all such programs.

We recommend that each department provide a program of occupational counselling for its men and women majors, either on its own or in conjunction with the Career Planning and Placement Center.

4. Our data shows that advisers and counsellors currently discuss the problem of discrimination with their women students. As several students suggested, this kind of discussion can often be more discouraging than helpful. Stanford advisers and counsellors need to be sensitive to the fine line between a fatalistic discussion of discrimination and one that prepares women to meet the difficulties they will encounter with determination instead of with surprise.

We recommend that the Dean of Students Office develop written material and discussion sessions for advisers and counsellors that will orient them to the special needs of women students.

5. Role modeling is an important function of Stanford advisers. Yet most Stanford professors are men. Therefore, students have few opportunities to meet successful professional women and to observe alternative approaches to being a working woman or a working mother. We recommend that the Dean of Students encourage the participation of professional women in University public functions and in activities at University residences, until there are more women on the faculty.

SUMMARY OF RECOMMENDATIONS

Stanford undergraduate women have high aspirations. Many of them plan to assume a place in society which has traditionally been reserved for men. Attaining this goal will not be easy.

As part of its efforts to educate full human beings and productive members of society, Stanford has taken on some responsibility for counselling students about career opportunities and trying to place them in jobs after graduation. Although one-third of Stanford undergraduates are women, the University has not paid sufficient attention to their special needs and problems. A number of possibilities should be explored.

First, it is important for all members of the Stanford community to understand that men and women students today share the same goals and aspirations. Second, Stanford should make an effort to open up both occupational and academic areas which have been closed to women in the past. The administration should continue to give high priority to its efforts to hire women in professorial and high level administrative jobs. A similar effort to attract women should be made by departments which have few women students. By acting as a leader in these areas, Stanford can help to improve the employment situation which its women students will be entering.

Finally, the University should make an effort to orient some of its counselling services to the needs of women students by giving them the opportunity to meet more women who have successfully combined childrearing and a career, by involving the major department in programs which would give all students a broad perspective on the job opportunities open to them, and by sensitizing counsellors and advisers to the problems of women.

To accomplish these goals, the Committee on the Education and Employment of Women at the University recommends that:

1) The Dean of Undergraduate Studies and the Provost take steps to ensure that the findings of this study are communicated to all professors, advisers, counsellors and administrators, especially those who have extensive contact with undergraduates.

2) The Dean of Undergraduate Studies develop a list of advisers that are particularly interested in working with women undergraduates. Students should be informed that they have the option of choosing someone from this list to replace their current adviser. In addition, the Dean of Undergraduate Studies should consider developing procedures by which students can register complaints if they experience discrimination from their adviser.

3) Departments with fewer than 25% women majors should experiment with ways of attracting more women majors (such as distributing written materials through the Academic Information Center or encouraging current women majors to discuss the department's program with other women). These departments should also determine the proportion of women undergraduates that join and leave their undergraduate program. Departments may wish to confer with the Committee on the Employment and Education of Women about methods for

recruiting women, and they should report their progress to the Committee by the end of Spring Quarter, 1973.

4) The Career Planning and Placement Center report on what activities and what additional staff are required in order to provide better service to women undergraduates.

5) Legal and practical counselling about dealing with discrimination be made available at the Placement Center.

6) Each department provide a program of occupational counselling for its men and women majors, either on its own or in conjunction with the Career Planning and Placement Center.

7) The Dean of Students Office develop written material and discussion sessions for advisers and counsellors that will orient them to the special needs of women students.

8) The Dean of Students encourage the participation of professional women in University public functions and in activities at University residences, until there are more women on the faculty.

APPENDIX 1. QUESTIONNAIRE

Dear SENIOR:

I would like to ask for your help in a study of how undergraduate men and women choose a major and decide on their future occupation. We are interested in what part the University plays in this process, and in how the University can become more responsive to the needs of students.

Enclosed, you will find a questionnaire which we hope will give us some insight into how students make decisions. Please help us by promptly filling it out and returning it in the enclosed, stamped envelope. We are counting on your cooperation. Only a high return rate will allow us to do a meaningful analysis of the data and propose useful changes in the University. Unless you notify us that you would prefer not to answer our questionnaire, we will try to contact you again about its return.

Naturally, all of the data will be analyzed using identifying numbers, and anonimity will be preserved. We will keep a record of your name if it is not returned. You will notice that we have obtained information on your field of interest as a freshman from the card you filled out when you entered Stanford. Other than this, we only have information on your major and where to locate you.

Thank you for your help.

Sincerely,

Professor Francesca Cancian

P.S. Please feel free to make any comments you think would be helpful at the end of the questionnaire.

SURVEY OF MAJOR AND OCCUPATION CHOICE

Please answer the questions on the following pages as completely as you can.

1. What is your birthdate?

2. Please circle one. MALE FEMALE

3. When did you first register at Stanford? (month, year)

4. When do you plan to graduate? (month, year)

   When you were a freshman, you said your probable field of study was

5. What is your major now?

6. Have you declared a major in any other areas besides this one while you have been at Stanford? If so, please list the other areas in which you have majored.

7. Are there any other areas of study you have seriously considered, (but never declared as a major)? If so, please list them here.

8. We are interested in the factors which lead some students to retain primary interest in the same field of study while they are at Stanford and others to change emphasis one or several times.

   On the following pages are lists of factors which often affect students' decisions to enter or leave a field of study. You will be asked to rate the importance of these factors for you for 1) your major field of interest as a freshman, if you had one, 2) the first major you declared, and 3) your present major, if it is different from your first declared major. We realize that you may have had other interests or majors. We have limited our questions to these three areas to keep this survey reasonably short.

   For each of the following sections which is relevant to your situation, rate every factor as follows: If you feel the reason was VERY IMPORTANT, put a 2 in the space provided. If you feel the factor was SOMEWHAT IMPORTANT, put a 1 in the space. If you feel the factor was NOT IMPORTANT AT ALL, put a 0 in the space.

FRESHMAN FIELD OF INTEREST:

As a freshman, you said your probable field of study was

PLEASE RATE EACH OF THE FOLLOWING FACTORS FOR THEIR IMPORTANCE TO YOUR INTEREST IN THIS AREA WHEN YOU WERE A FRESHMAN. (If you mentioned more than one field, please answer in terms of the randomly selected field which we have circled.)

A--Reasons for Attraction to Field

a. Interest in subject matter
b. Thought that was what Stanford wanted to hear
c. Things you studied or read about
d. Experienced success in area
e. Work in field was easy for me
f. Expected what I learned and/or credential earned in field to help in intended future occupation
g. Consistent with anticipated or present life with spouse or partner
h. Consistent with my self-concept as a (man, woman)

i. Good resources for study in field available at Stanford
j. Experience in summer job or other employment
k. Friends or parents gave advice or acted as examples(s) of individual(s) in field
l. Advice of high school counsellor
m. Advice of academic adviser
n. Advice of professor besides academic adviser
o. Professor acted as example of individual in field
p. Other individual in field of interest gave advice or served as example
q. Other (please specify)

B--Reasons for Leaving Field

IF YOU LEFT THIS FIELD, PLEASE RATE THE FOLLOWING FACTORS IN THE SAME MANNER, for their importance to your loss of interest in or decision to leave this field.

a. Instruction in field inadequate or unavailable at Stanford
b. Acquired dislike for field
c. Found different field more interesting
d. Felt my abilities were not suited to field
e. Experience in summer job or other employment
f. Experienced discrimination because of sex
g. Experienced discrimination because of race
h. Anticipated discrimination because of sex
i. Anticipated discrimination because of race
j. Friends or parents gave advice or acted as example(s) of individual(s) in field
k. Advice of academic adviser
l. Advice of professor besides academic adviser
m. Professor acted as example of individual in field
n. Other individual in field of interest gave advice or served as example
o. Other (please specify)

FIRST MAJOR DECLARED:

What was the first major you declared?

Was your first declared major the same as your freshman field of interest?

Did you declare a major in your freshman year?

If you answered YES to BOTH of the previous questions, please go on to the next page.

If you did NOT answer yes to both of the questions, please RATE EACH OF THE FOLLOWING FACTORS FOR THEIR IMPORTANCE TO YOUR DECISION TO DECLARE A MAJOR IN THIS AREA

A--Reasons for Attraction to Field of First Major

a. Interest in subject matter
b. Things you studied or read about
c. Experienced success in area
d. Work in field is easy for me
e. Expected what I learned and/or credential earned in field to help in intended future occupation
f. Required to declare major
g. Major allows entry into desired classes (e.g., studio art)
h. Consistent with my self-concept as a (man, woman)
i. Consistent with anticipated or present life with spouse or partner

j. Good resources for study in field available at Stanford
k. Experience in summer job or other employment
l. Friends or parents acted as example(s) of individual(s) in field or gave advice
m. Advice of academic adviser
n. Advice of professor besides of academic adviser
o. Professor acted as example of individual in field
p. Other individual in field of interest gave advice or served as example
q. Other (please specify)

B--Reasons for Leaving Field of First Major

IF YOU ARE NO LONGER IN THIS FIELD, PLEASE RATE THE FOLLOWING FACTORS IN THE SAME MANNER, (for their importance to your loss of interest in or decision to leave this field.)

a. Instruction in field inadequate or unavilable at Stanford
b. Acquired dislike for field
c. Found different field more interesting
d. Felt my abilities were not suited to field
e. Experience in summer job or other employment
f. Experienced discrimination because of sex
g. Experienced discrimination because of race
h. Anticipated discrimination because of race
i. Anticipated discrimination because of sex
j. Friends or parents gave advice or acted as example(s) of individual(s) in field
k. Advice of academic adviser
l. Advice of professor besides academic adviser
m. Professor acted as example of individual in field.
n. Other individual in field of interest gave advice or served as example
o. Other (please specify)

PRESENT MAJOR:

What is your present major?

A--IF YOUR PRESENT MAJOR IS DIFFERENT FROM THE FIRST MAJOR YOU DECLARED, please rate each of the following factors for their importance in your decision to major in this area.

a. Interest in subject matter
b. Things you studied or read about
c. Experienced success in area
d. Work in field easy for me
e. Expected what I learned and/or credential earned in field to help in intended future occupation
f. Consistent with my self-concept as a (man, woman)
g. Consistent with anticipated or present life with spouse or partner
h. Good resources for study in field available at Stanford
i. Major allows entry into desired classes (e.g., studio art)
j. Experience in summer job or other employment
k. Friends or parents acted as example(s) of individual(s) in field or gave advice
l. Advice of academic adviser
m. Advice of professor besides academic adviser
n. Professor acted as example of individual in field
o. Other individual in field of interest gave advice or served as example
p. Other (please specify)

9. Some students at this point have specific ideas about what they want to do after graduation, while others still prefer to remain open to many possibilities. What do you

expect your MAJOR activity to be in the six months after your graduation? (Please check one)

a. Go on for further study
b. Full-time employment
c. Volunteer work
d. Military service
e. Alternative service
f. "Community service" (Vista, Peace Corps, etc.)
g. Travel
h. Concentrate on care of home and children
i. I really don't know
j. Other (please specify)

10. How long will you continue in the activity you checked in the previous question? (Please check one)

a. More or less permanently
b. Until I complete planned studies
c. Until term of service has expired
d. Until I find suitable long-term employment
e. Until I am ready to go back to school
f. Until I earn enough money to continue schooling
g. Until it is time to raise children
h. Until spouse completes schooling and I can stop work
i. Until spouse completes schooling and I can complete schooling
j. Until spouse completes schooling and I can look for a better job.
k. Other (please specify)

11. Some students have specific long-range plans at this point in their education, while others have more general goals. Have you already decided on a specific occupation?

If so, please describe it as completely as possible.

12. If you do not have a specific occupation in mind, please describe what you plan to do in more general terms.

I have no idea.

13. If you are planning further study at any time in the future, please answer the questions in the box below. If not, go on to 14.

A. In what area are you planning further study?
B. Are you planning to study in a formal program–or informally?
C. For what degree(s) and/or credential are you planning to study?
D. When do you plan to begin? Summer or Fall 1972; 1973; 1974; later than 1974
E. To what extent do you see further study as preparation for your planned future occupation? exclusively; considerably; somewhat; not at all

14. What have you done in preparation for your planned occupation? (Please check one or more)

a. Used written material as information source
b. Talked to individual(s) in area
c. Have experience in area
d. Have acquired or prepared to acquire needed credential
e. Have acquired or prepared to acquire needed knowledge
f. Have looked for employment in area (for after graduation)
g. Have found employment in area (for after graduation)
h. Please check here if you have no planned occupation.

15. Ideally, what will your occupation or main activity be in five years?

16. If you believe that, realistically, you will not be engaged in the ideal future occupation you described in question 15, what do you think you will be doing?

    I will probably be engaged in ideal occupation.

17. What future occupations have you seriously considered for yourself during the past four years? (Please list them below, including any plans you mentioned in the previous section. Start with the present and work back to your freshman year.)
    1)
    2)
    3)
    4)

18. While your own experience is usually very important in choosing an occupation the advice or example of others often affects such choices as well. Of those who had any effect at all on your consideration of all the occupations listed in question 17 above, please list the three individuals whom you feel had the greatest effect on you. For each individual, give their relationship to you, (such as cousin, or professor) and their occupation.
    1) Greatest effect:
    2) Second greatest effect:
    3) Third greatest effect:

We would like to know which of the following members of the Stanford community had any effect on your occupational plans, the extent of the effect, and its nature. Please check each of the statements below which are true for you.

19. FRESHMAN ADVISER
    great effect on my plans; considerable effect; some effect; no effect; no contact (Please check one)

    If you checked "no effect" or "no contact," go on to question 20 now.

    In which occupational areas do you feel your freshman adviser affected your consideration?

    For each of the areas you listed, if any, please indicate which of the following statements most accurately describes your contact with your freshman adviser by writing the name of the area next to the statement.

    Your freshman adviser encouraged you in
    Your freshman adviser actively discouraged you in
    Your freshman adviser failed to encourage you in
    Does not apply

    Please check the statements which you feel accurately describe the nature of the contacts with your freshman adviser WHICH AFFECTED YOUR OCCUPATIONAL CONSIDERATION

a. Adviser served as a positive example of individual in field
b. Adviser served as a negative example of individual in field
c. Adviser showed me where to best satisfy my interests
d. Adviser showed me where to best use my capabilities
e. Adviser described employment opportunities
f. Adviser described potential for earnings
g. Adviser described time demands for training for or practicing occupation
h. Adviser described discrimination because of sex in area
i. Adviser described discrimination because of race in area

j. Adviser emphasized social usefulness, benefits of occupation
k. Adviser pointed out conflict of occupation with other roles
l. Other (please specify)

20. MAJOR ADVISER
great effect on my plans; considerable effect; some effect; no effect; no contact (Please check one)
If you checked "no effect"or "no contact," go on to question 21 now.

In which occupational areas do you feel your academic adviser affected your consideration?

For EACH of the areas you just listed, if any, please indicate which of the following statements most accurately describes your contact with your major adviser by writing the name of the area next to the statement.

Your major adviser encouraged you in
Your major adviser actively discouraged you in
Your major adviser failed to encourage you in
Does not apply

Please check the statements which you feel accureately describe the nature of the contacts with your major adviser WHICH AFFECTED YOUR OCCUPATION CONSIDERATION.

a. Adviser served as a positive example of an individual in the field
b. Adviser served as a negative example of an individual in the field
c. Adviser showed me where to best satisfy my interests
d. Adviser showed me where to best use my capabilities
e. Adviser described employment opportunities
f. Adviser described potential for earnings
g. Adviser described time demands for training for or practicing occupation
h. Adviser described discrimination because of race in area
i. Adviser described discrimination because of sex in area
k. Adviser pointed out conflict of occupation with other roles
l. Other (please specify)

21. CAREER COUNSELLOR IN PLACEMENT CENTER
great effect on my plans; considerable effect; some effect; no effect; no contact (Please check one)
If you checked "no effect" or "no contact" go on to question 22.

In which occupational areas do you feel a career counsellor affected your consideration?

For each of the areas you just listed, if any, please indicate which of the following statements most accurately describes your contact with a career counsellor by writing the name of the area next to the statement.

The counsellor encouraged you in
The counsellor actively discouraged you in
The counsellor failed to encourage you in

Please check the statements which you feel accurately describe the nature of the contacts with the career counsellor WHICH AFFECT YOUR OCCUPATIONAL CONSIDERATION.

a. Counsellor showed me where to best satisfy my interests
b. Counsellor showed me where to best use my capabilities
c. Counsellor described employment opportunities
d. Counsellor described potential for earnings

e. Counsellor described time demands for training or for practicing occupation
f. Counsellor described discrimination because of race in area
g. Counsellor described discrimination because of sex in area
h. Counsellor described social usefulness, benefits of occupation
i. Counsellor pointed out conflict of occupation with other roles
j. Other (please specify)

22. What services that Stanford now offers, if any, have been helpful to you in planning your future?

23. What services which are not now offered would you find helpful, if any?

24. Do you feel you have been discouraged from any academic or occupational goal goal or interest by a member of the Stanford community because of your sex? Please be specific.

APPENDIX 2. RESEARCH METHODS

Drawing a Sample

The population from which the sample was drawn and to which we have generalized consisted of all students who 1) entered Stanford as freshmen in 1968, 2) had enough units to graduate in June, 1972, (defined as having accumulated over 155 units by the end of winter quarter of this year), 3) had not already graduated, and 4) were registered in the spring quarter of 1972.

The sample was stratified according to the students' original academic interests upon entering Stanford, in order to provide a sufficient number of cases to test the following hypothesis: male students tend to move into "male fields" and women tend to move out of these fields.

"Male-dominated fields" were defined as all fields having less than 25% women majors at Stanford. (36% of Stanford undergraduates are women.) All other fields were defined as "non-male-dominated." Refer to Part 3 of the Appendix for a listing of the sex-type of Stanford majors.

Data on the students' freshman field of interest was taken from the Dean of Student's Office, which has records on how students responded to the question, "What is your probable field of study?" at the time that they were offered admission to Stanford. The sample was randomly drawn from the following groups: 1) male-dominated, science, 2) male-dominated, nonscience, 3) non-male-dominated, 4) undecided, 5) "conflicted" (interested in both male-dominated and non-male-dominated fields). A random selection was made from each group for both men and women. In some cases, the entire population of a group was included. (See the table at the end of this section for number of students in each group of the sample.)

Administering the Questionnaire

Subjects were mailed a questionnaire, whose cover letter explained that the purpose of the research was to upgrade Stanford services to students. Two weeks later, they received a postcard as a reminder. In another two weeks, those who did not respond were sent another questionnaire. Finally, an attempt was made to contact nonrespondents by phone and ask them whether or not they planned to return the questionnaire.

Of the 375 subjects in the original sample, 23 were eliminated because they were not registered spring quarter. Another 9 never got the questionnaire, since their post office boxes had been closed. 280 questionnaires were returned. Excluding only those who were not registered from the sample, the response rate was 79%. When those who never received the questionnaire are also excluded, the response rate is 82%.

Weighting Sample Section

Data not dealing with switches between majors was weighted so as to be representative of the population according to the formula: $\text{WEIGHTFACTOR} = \frac{\text{No. in section of freshman class}}{\text{No. respondents in section of sample}}$

The number in the section of the freshman class was used to approximate the number in the population which was not available. This resulted in a computer data file the size of, and statistically representative of, the whole population. The following table shows the number of students in sections of the population, the number of students to whom questionnaires were mailed, and the number of respondents in that sample section:

WOMEN

	Male-dominated Science	*Male-dominated Nonscience*	*Non-male-dominated*	*Undecided*	*Conflicted: Male-dominated and Nonmale-dominated*	*Total*
No. in freshman class (approximating population)	106	74	173	97	33	483
No. chosen in sample	56*	35*	50	31*	13	185
No. respondents	47	24	37	27	9	144
Weight $\frac{\text{No. in population}}{\text{No. respondents}}$	2.255	3.083	4.676	3.593	3.667	

MEN

No in freshman class (Approximating population)	402	169	79	236	29	915
No. chosen in sample	50	50	37*	30	20*	187
No. respondents	46	40	19	19	12	136
Weight $\frac{\text{No. in population}}{\text{No. respondents}}$	8.739	4.225	4.158	12.421	2.417	

* Total population, i.e., all who met criteria stated in first paragraph of this appendix.

The statistics in the report are given in percentages representing the entire population, unless otherwise indicated. The statistical significance of differences was not calculated. The size of the sample in relation to the total population gives us the confidence that it approaches the reliability of a census of the total population (for which sampling statistics are meaningless).

APPENDIX 3. SEX-TYPE OF STANFORD MAJORS

General
Undecided
Science
Social Science
Humanities – Liberal Arts
Pre-law
Education as entering freshman

Male-dominated, science
Applied Physics
Biochemistry
Biology
Biophysics
Chemistry
Computer Science
Earth Sciences*
Engineering (all fields)
Genetics
Math
Medicine
Neurological Sciences
Pharmacology
Physical Sciences
Physics
Statistics
Pre-med

Male-dominated, nonscience
Urban Planning, Environmental Design
Architecture, Urban Design
Business
Economics
History
Law
Philosophy
Political Science
Social Thought

Non-male-dominated
Africa/Afroamerican Studies
Anatomy
Anthropology
Art
Chinese
Classics
Communication (journalism)
Comparative Literature
East Asian Studies
Education
English
French
German
Human Biology
Humanities (Religious Studies)
Interdepartmental
Italian
Japanese
Latin American Studies
Linguistics
Medical Microbiology
Music
Nursing
Physical Therapy
Physiology
Psychology
Slavic Languages and Literature
Sociology
Spanish
Speech and Drama
Speech and Hearing Sciences

Other
CPA
Medical Technology
Radiology
Sports
Religion – divinity, prep for ministry (not undergraduate)
Criminology
Photography

*Earth Sciences:
Geology
Geophysics
Hydrology
Mineral Engineering
Petroleum Engineering

APPENDIX 4. OCCUPATIONAL CATEGORIES

Coding of Occupations

Occupational codes devised by Ralph Turner were used since they emphasized status differences between occupational areas and had a substantial number of categories at the professional level. See R. Turner, The Social Context of Ambition, San Francisco: Chandler, 1964, Appendix B. The basic classifications are listed below:

Classification System

The following listing presents the nine major occupational groups in approximately ascending order of socioeconomic standing. There is no significance to the ordering of socioeconomic standing. There is no significance to the ordering of occupational subcategories. The listing of specific occupational titles after each subcategory title is purely illustrative, rather than exhaustive, and is based upon actual occupational titles which appear in our data.

1. Unskilled Laborer
2. Semiskilled Laborer
3. Skilled Laborer
   - 3-0 Protective: Air Force ground crew, airline hostess, Army, Navy, Marines, Coast Guard, Air Force, detective, fireman, lifeguard, policeman.
   - 3-1 Food and personal service: Baker, barber, bartender, beauty operator, brewer, chef, cook.
4. Lesser White-collar Worker
   - 4-0 Clerical: Bank teller, bookkeeper, secretary, claims investigator, office or desk job.
   - 4-1 Salesclerk
   - 4-2 Other: TV cameraman, movie cameraman, photographer, magazine photographer, telephone operator.
5. Small-business Owner, Manager, and Salesman
   - 5-0 Agriculture: Farmer, nursery owner, rancher, landscaper.
6. Semiprofessional and Public Administrator
   - 6-0 Art: Artist, cartoonist, art designer, interior designer, makeup artist, fashion illustrator, architect, dress designer, fashion consultant, fashion designer, ceramicist.
   - 6-1 Music and general entertainment: Actor, TV or radio announcer, coach, professional athlete, choreographer, movie or stage director, singer, musician, sound editor, film editor, "private" music teacher, sound technician, professional race-track driver, physical culturist.
   - 6-2 Literature: Writer, journalist, reporter, translator, advertising copy writer.
   - 6-3 Scientific and medical service: Statistician, dietician, nurse, nutritionist, embalmer, funeral director, lab assistant, lab technician, mortician, physical therapist, x-ray technician, dental hygienist, acturary, medical librarian, home economist, weatherman, tree surgeon, recreational therapist, computer programmer.
   - 6-4 Government administration: Postmaster, post-office inspector, tax collector, substation head, chief of police, foreign service (consulate), public official, forest ranger, forester, game warden, state interviewer, military officer, tax assessor, politician, secret-service agent.
   - 6-5 Miscellaneous semiprofessional: Airplane pilot, investment counselor, labor-relations counselor, librarian, public-relations man, securities analyst, "practical" nurse, agricultural consultant, industrial-relations counsellor.
7. Business Agent and Manager
   - 7-0 No other classification
   - 7-1 Management: Advertising manager, art director, personnel manager, plant superintendent, department head, real-estate manager, business manager, credit

manager, production manager, sales manager, escrow officer, construction superintendent, field superintendent.

7-2 Accounting: Acountant (Comptroller)

8. Professional
   - 8-0 Unspecified (Curator)
   - 8-1 Medical: Doctor, physician, dentist, psychiatrist, osteopath, psychoanalyst.
   - 8-2 Legal: Auditor, CPA, lawyer, criminologist, judge, judge advocate in army
   - 8-3 College educator and scientist: Educational administrator, psychologist, chemist, archeologist, astronomer, bacteriologist, geologist, geophysicist, horticulturist, hydrographer, mathematician, meteorologist, oceanographer, physicist, researcher, sociologist.
   - 8-4 Educator: Primary and secondary levels, church school teacher.
   - 8-5 Engineer: Electronics researcher, civil engineer.
   - 8-6 Certificated social service and related: Certificated speech therapist, school psychologist, occupational therapist, recreation director, psychotherapist, social worker.
   - 8-7 Religious: Minister, missionary, nun.
   - 8-8 Lesser medical: Veterinarian, pharmacist, optometrist, chiropodist, chiropractor.

9. Large-business Owner and Official
   - 9-0 Official: Bank president, banker, business executive, producer, hotel manager, area representative.

APPENDIX 5. TABLES

5-1. IDEAL AND REALISTIC ASSESSMENTS OF OCCUPATION IN FIVE YEARS

Responses to questions 15 and 16:

"Ideally, what will your occupation or main activity be in five years?"

"If you believe that, realistically, you will not be engaged in the ideal future occupation you described in question 15, what do you think you will be doing?"

In the following table, the "Ideal" column show responses to the first question, the "Real" column, the students' realistic assessment of what they will be doing in five years, (combining the responses to both questions). Responses of students who presented alternative plans (X or Y) are *not* included in the table or in the percentages. They represent 10.1% of the men and 8.3% of the women who responded concerning ideal occupation and 11.7% of the men and 12.3% of the women who made a realistic assessment of what they would be doing in five years.

Turner's "Prestige-Subcultural Classification of Occupations" was used to categorize responses. Refer to Appendix 4 for the specific content of these categories.

TABLE 1

	Male (%)		*Female (%)*	
	Ideal	Real	Ideal	Real
1. Large business official	2.1	1.9	0.0	0.0
2. Lesser medical	1.1	0.0	0.0	0.0
3. Religious	1.6	1.3	0.0	0.0
4. Certified social service	0.0	0.0	2.1	2.5
5. Engineer	0.0	0.0	0.0	0.0
6. Educator (teacher)	3.2	2.0	6.3	10.4
7. College educator, scientist	13.3	11.6	13.0	6.6
8. Legal	15.3	15.2	6.9	7.0
9. Medical	19.5	21.7	18.3	19.1
10. Professional (no other category)	2.7	3.3	1.6	0.0
11. Accounting	1.1	0.0	0.0	0.0
12. Business management	0.5	0.0	0.5	0.6
13. Business agent, manager	4.0	4.5	4.8	4.5
14. Miscellaneous semiprofessional	0.0	0.0	0.7	0.0
15. Government administration	1.6	3.2	1.8	0.6
16. Scientific and medical service	3.0	3.6	6.4	6.7
17. Literature	1.6	2.6	6.5	3.1
18. Music, general entertainment	2.1	2.6	6.0	6.2
19. Art	2.7	3.3	5.2	5.0
20. Semiprofessional-public administrator	0.0	0.0	0.0	0.6
21. Agriculture	1.4	0.4	0.0	0.0
22. Photographer, cameraman	0.0	0.0	2.1	1.3
23. Lesser white collar	0.0	0.4	0.0	0.0
24. Other skilled labor	0.0	0.0	0.0	1.0
25. Food and personal service	1.6	1.9	0.0	0.6
26. Protective skilled labor	0.0	1.3	0.0	0.0
27. Looking for or in ideal occupation[1]	0.0	0.6	0.0	1.3
28. Preparing for ideal occupation	1.4	1.3	1.2	4.0
29. Serving, organizing society	0.0	0.0	2.5	1.0
30. Volunteer work	0.0	0.0	0.8	0.0
31. General blue-collar	0.5	1.3	1.3	1.8
32. Student	2.2	2.6	1.1	1.3
33. Housewife	0.0	0.0	2.8	3.2
34. Unemployed	0.0	0.6	0.0	0.0
35. Uncodeable	1.7	1.7	1.2	0.6
36. Don't know	15.9	10.9	6.7	11.0
	N=118	N=111	N=132	N=122

5.2. PREPARATION FOR PLANNED OCCUPATION

(by students having occupational plans)

The table shows the percentages of students having planned occupations who checked each of the following activities in response to the question: "What have you done in preparation for your planned occupation?"

TABLE 2

Female (%)	*Male (%)*	
56.4	55.5	Used written material as information source
85.8	80.9	Talked to individual(s) in area
46.3	46.7	Have experience in area
40.1	47.3	Have acquired or prepared to acquire needed credential
72.6	61.0	Have acquired or prepared to acquire needed knowledge
26.5	17.7	Have looked for employment in area (for after graduation)
6.7	11.0	Have found employment in area (for after graduation)
N=123	**N=116**	

Number of responses checked:

	Female	*Male*
Mean	3.33	3.2
Mode	4	2
Median	3.35	2.99

5-3. MAJOR ACTIVITY IN THE NEXT SIX MONTHS

The following responses were given to the question:

"Some students at this point have specific ideas about what they want to do after graduation, while others still prefer to remain open to many possibilities. What do you expect your MAJOR activity to be in the six months after your graduation?" (Please check one.*)*

TABLE 3

		Male (%)	*Female (%)*
A.	Go on for further study	54.5	49.3
B.	Full-time employment	17.5	28.8
C.	Volunteer work	0.0	1.5
D.	Military service	6.7	0.0
E.	Alternative service	0.5	0.0
F.	"Community service"	4.3	1.5
G.	Travel	5.9	3.1
H.	Concentrate on care of home & children	0.0	0.0
I.	I really don't know	5.4	10.4
J.	Other	5.3	5.3
		N=135	**N=134**

5-4. PLANNED DURATION OF FULL-TIME EMPLOYMENT BEGUN IN THE SIX MONTHS AFTER GRADUATION

Students who said they would probably be employed full-time in the six months after graduation gave the following responses to the question:

"How long will you continue in the activity you checked in the previous question? (please check one)." (Refer to Table 3 for responses to "the previous question.")

TABLE 4

		Male (%)	*Female (%)*
A.	More or less permanently	12.4	9.2
B.	Until I complete planned studies	0.0	2.3
C.	Until term of service has expired	2.6	0.0
D.	Until I find suitable long-term employment	2.7	8.7
E.	Until I am ready to go back to school	36.5	44.4
F.	Until I earn enough money to go back to school	26.8	15.4
G.	Until it is time to raise children	0.0	7.0
H.	Until spouse completes schooling and I can stop work	0.0	3.4
I.	Until spouse completes schooling and I can complete schooling	0.0	0.0
J.	Until spouse completes schooling and I can look for a better job	0.0	0.0
K.	Other	19.1	9.6
		N=26	**N=40**

5-5. SINGLE DEGREES SOUGHT BY THOSE WITH CERTAIN EDUCATIONAL PLANS

Students who plan to go on for further education and expressed no uncertainty about their plans said they would get the following degrees: (The responses of those who mentioned more than one degree are excluded from the table. They represent 6.7% of the men and 19.7% of the women with certain educational plans. For this reason, the columns do not add up to 100%.)

TABLE 5

	Female (%)	*Male (%)*
1. Ph.D.	12.9	16.0
2. M.D.	16.4	25.4
3. L.L.B., J.D.	14.0	30.4
4. Environmental Masters	2.6	2.0
5. M.B.A.	7.8	6.9
6. M.A.T.	0.0	0.0
7. Masters	18.9	11.9
8. R.N.	1.8	0.0
9. Teaching Credential	1.7	0.6
10. Medical technology license or degree	2.1	0.0
11. Professional B.A.	1.4	1.4
12. Certificate	0.7	0.0
	N=105	**N=94**

5-6. FUTURE OCCUPATIONS CONSIDERED AT STANFORD

The following responses were given to the question:

"What future occupations have you seriously considered for yourself during the past four years? (Please list them below including any plans you mentioned in the previous section. Start with the present and work back to your freshman year.)"

Students who never considered a future occupation or did not respond are not included in the table.

TABLE 6

	Male %		*Female %*	
	First plan considered	Present plan	First plan considered	Present plan
1. Professional	57.7	70.0	33.5	49.5
2. Traditional female jobs (helping professions)	13.6	5.7	30.9	13.6
3. Other nonprofessional jobs	20.1	14.4	21.7	25.5
4. Alternative life style occupations	10.6	9.9	9.8	10.7
5. Unclassifiable	0.0	0.0	4.1	0.8
		N=127		**N=135**

The instructions used to define responses in these categories were:

1 = Professional, business, professor College-University, scientist, engineer, highest status jobs; Business = management or ownership

2 = Helping professions and clerical–female-type jobs; nurse, social service, teacher secondary and below, secretary, counsellor

3 = Technical jobs, other non-female-type jobs; technician, computer programmer, CPA, lower level business, government administration, journalists, film-director, ad-man

4 = Creativity and alternative life-style; artist, creative writer, religious follower, political organizing, communal living, "bum," "free"

5 = Unclear e.g., "travel job," "working with people"

9 = No answer, blank

FOOTNOTES

I. The New Stanford Woman

1 47.2% of the men and 57.2% of the women have definite long-range plans. (They checked "yes" in response to the question, "Some students have specific long-range plans at this point in their education, while others have more general goals. Have you already decided on a specific occupation?") 91% of both men and women have single plans. (They made only one codeable response to instructions to describe their definite long-range plans.)

2 See Appendix 5-1.

3 The categories used to code occupational responses may be found in Appendix 4.

4 N=108 for the men; N=125 for the women. The status rankings of the Turner code, Appendix 4, were used as an independent measure of the status of ideal and realistic assessments of future occupations. Not a single student named a lower status occupation as his or her realistic assessment without mentioning that the occupation *was* lower status.

5 See Appendix 5-1 for the complete table. Differences between this table and Table 1 in the text are explained by differences in the characteristics of the respondents for whom data was tablulated. Table 1 shows only the responses of those with definite long-range plans, while Table 2 shows the plans of all those who responded with an ideal and a realistic assessment of what they will be doing in five years.

6 See Appendix 5-3. A large majority (over 90%) of both men and women see further education as preparation for their planned future occupation.

7 See Appendix 5-5 for a table of single degrees sought. The percentages presented here include those who plan to get two degrees. These students are counted under the highest status degree they mentioned, using the order shown in Appendix 5-5.

8 Joseph Katz, "Career and Autonomy in College Women," in *Class, Character, and Career, Determinants of Occupational Choice in College Students,* by Joseph Katz *et al.* Institute for the Study of Human Problems, (Stanford, 1969), p. 110.

9 See J. Davis, Undergraduate Career Decisions. Chicago, Aldine, 1965.

10 The 1965 data is based on responses about future occupational plans, collected six months after graduation, while the 1972 data shows student's realistic expectations of what they would be doing in five years, when asked in the quarter before graduation. Also, the categories used to classify occupations were somewhat different. (See footnotes to the table). The responses to the question about "realistic expectations" was used for the comparison because the proportion of "don't know" responses was most similar to the 1965 data.

11 Data taken from R. Hind and T. Wirth, *The Impact of University Experience on Occupational Choice Among Undergraduates,* Academic Planning Office, Stanford University. Data is based on a questionnaire administered six months after graduation to all seniors who entered as freshmen in 1961 and graduated in 1965. Some categories have been redefined to increase comparability with 1972 data.

12 Students' realistic assessment of what they will be doing in five years. Categories have been redefined to increase comparability. See Appendix 5-1 for complete table.

13 Includes architecture, dentistry, ministry, and engineering.

14 This includes only housewives; nurses are missing. (None of the women planned to be secretaries.) The accurate percentage could be as much as 7%.

15 Includes "don't know."

16 Katz, p. 111.

17 See Table 2 in the Appendix.

II. Sex Role Expectations and the Stanford Environment

1 24 of the 32 women who experienced discrimination specifically referred to faculty members.

III. Choice of Majors

1 See Appendix 2 for further information about data analysis, and Appendix 3 for classification of fields.

2 Science fields have the highest drop-out rates of any majors. They also have the lowest rate of attraction from other types of fields. Only 10% of the non-science majors ended up in science. Of the students who were interested in science as freshmen, 39% of the women and 39% of the men graduated in science.

3 94% of the women who switched out of male-dominated fields did so before they declared their first major. 80% of the men did so. More men than women also switched into male-dominated fields before declaring their first majors.

4 A list of male-dominated and non-male-dominated fields can be found in Appendix 3. Only those who expressed no uncertainty about their educational plans were included in this table.

IV. Academic and Occupational Counselling

1 26% of the women affected by their freshman advisers (N=23), 27% of the women affected by their academic advisers (N=41) and 23% of the women affected by a career counsellor (N=17) said that a description of discrimination in the area they were considering affected their occupational considerations.

2 See Table 3 in the Appendix.

3 See Table 2 in the Appendix.

Appendix 5.

1 Categories 27-36 were added to Turner's Code.